

Engineering and Operations Workgroup Study Plans

Study #6: Downstream Extent of
Reasonable Control of Feather River
Temperature by Oroville-Thermalito

November 16, 2001

Goal

- Quantify ability of Oroville Operations to control temperatures in Feather River
- Information useful for
 - Setting reasonable temperature goals in Lower Feather River
 - Determine downstream extent of temperature control by Oroville – Thermalito complex operations
 - Defining alternative operation scenario's
 - Focus Feather River temperature model development
 - Cold water pool management

Task 1 – Obtain Existing Feather River Temperature Model

- Acquire rights to use RMA-10 (modeling tool used to develop the model)
- Obtain model documentation
- Obtain available input data sets
- Run existing data sets to verify model installation

Task 2 – Design Sensitivity Analysis

- Select parameters
- Select range for each parameter
- Select appropriate combinations of parameters
- Develop matrix of simulations

Task 3 – Perform the Model Runs

- Ensure Feather River Temperature model can perform the simulations
- Develop database to store results of simulations
- Perform simulations identified in Task 2

Task 4 – Analyze the results to define area of impacts

- Extract data from database
- Determine downstream temperature profile
- Determine “control” distance
- Develop relationships between parameters and downstream control distance

Task 5 – Write final report

- Write report of finding including:
 - Document all assumptions
 - Document process followed
 - Derived relationships between parameters and Feather River temperatures

Products

- Derived relationships between parameters and Feather River temperatures
- Information on ability of Oroville Thermalito operations to provide “reasonable” control of Feather River temperature